REMARKS

Claims 4-6, 8-12, and 16-21 and 23-25 are pending. Claims 4, 6, 11, and 16 are in independent form.

In the action mailed December 11, 2006, claim 12 was objected to as being improper for failing to limit independent claim 11. In particular, the objection is understood to contend that every fluorination of a surface (as recited in claim 11) inherently involves a deposition of fluorine atoms or fluorine containing groups (as recited in claim 12).

Applicant respectfully disagrees. For example, attention is respectfully directed to para. [0028] and the discussion of the consequences of plasma fluorination therein. As can be seen, the fluorination of a surface can be accomplished through chemical modification of the surface. Such a chemical modification does not inherently involve the deposition of fluorine atoms or fluorine containing groups.

Accordingly, applicant asks that the objection to claim 12 be withdrawn.

Claim 20 was objected to as including a typographical informality. Claim 20 has been amended to address the Examiner's concerns.

Claims 6, 8, and 25 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite. In particular, the rejection contends that the scope of the claims is not discernable to those of ordinary skill since the variables x, y, z, and n are not defined by the claim or by the specification.

Applicant respectfully disagrees. The variables x, y, z, and n are not defined in the specification or claims because the number of unit repetitions designated by those variables is, in fact, undefined. The use of undefined variables to represent undefined numbers of repetitions of an element is in common usage both in chemistry and in other arts. The scopes of claims 6, 8, and 25 are thus discernable to one of ordinary skill.

The rejections of claims 6, 8, and 25 under 35 U.S.C. § 112, second paragraph, are thus improper. Accordingly, Applicant asks that these rejections be withdrawn.

Claims 11 and 12 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite for referring to "the bulk" and "the surface" of a fluoropolymer. In particular, the rejection contends that a "fluoropolymer is a molecule and therefore does not have a surface or a bulk."

Applicant respectfully disagrees. In this regard, it is in common usage to use terms such as "polymer" to refer to materials composed of polymer molecules. For example, submitted herewith as Appendix A is a copy of the entry for the term "polymer" from the Oxford English Dictionary Online which

clearly sets forth that the term "polymer" can be used to refer to materials composed of polymer molecules, in addition to the molecules themselves.

As another example, submitted herewith as Appendix B is a copy of the first 30 of 553 hits of a search for the phrase "the surface of the polymer." The search was conducted on Google Books on March 1, 2007 and is available at http://books.google.com/books?q=%22the+surface+of+the+polymer%22&btnG=Search+Books&as_brr=0. Please note that the 28th hit in the middle of page 4 is a book entitled "Polymer Surfaces, Interfaces, and Thin Films." Thus, this provides evidence that one of ordinary skill would understand polymers to have surfaces.

As yet another example, submitted herewith as Appendix C is a copy of the first 30 of 231 hits of a search for the phrase "the bulk of the polymer." The search was conducted on Google Books on March 1, 2007 and is available at http://books.google.com/books?q=%22the+bulk+of+the+polymer%22&btnG=Search+Books&as_brr=0. Thus, it is clear that one of ordinary skill would understand polymers to have a bulk.

Accordingly, the meaning of references to "the bulk" and "the surface" of a polymer is clearly discernable to those of ordinary skill. The rejections of claims 11 and 12 under 35 U.S.C. § 112, second paragraph, are thus improper. Accordingly, Applicant asks that these rejections be withdrawn.

Claim 21 was rejected under 35 U.S.C. § 112, second paragraph, as indefinite for reciting that a vapor deposited layer is "largely independent" of the composition and surface properties of the bulk. In particular, the rejection contends that the specification does not provide a standard for ascertaining the requisite degree of independence between a vapor deposited layer and the composition and surface properties of the bulk.

Applicant respectfully disagrees. Attention is respectfully directed to para. [0038] which contrasts the influence of composition and surface properties on depositions formed by chemical vapor deposition (CVD) and atomic layer deposition (ALD). In particular, the specification describes that deposition under most CVD conditions occurs largely independent of the composition or surface properties of an underlying substrate, whereas deposition under ALD might be influenced by such factors.

Since those of ordinary skill would understand the differences between CVD and ALD, the scope of claim 21 is discernable to those of ordinary skill. The rejection of claim 21 under 35 U.S.C. § 112, second paragraph, is thus improper. Accordingly, Applicant asks that this rejection be withdrawn.

Claim 22 was rejected under 35 U.S.C. § 112, second paragraph, as indefinite for reciting that a perfluorinated copolymer is "perfluorinated to an extent characteristic of the pellicle film having been fluorinated after polymerization to eliminate hydrogen atoms from the polymer backbone in the treated surface." In particular, the rejection contends that perflucrinated polymers are, by definition, ones "in which all the hydrogens have been replaced with fluorine."

Please note that there is no inconsistency between the definition espoused by the rejection and the claim language. The rejection thus does not contend that applicant is using the term "perfluorinate" in a way that is inconsistent with the definition espoused by the Examiner. Instead, the rejection contends that applicant is using the term "perfluorinate" in a way that is consistent with the definition espoused by the Examiner.

Applicant respectfully submits that this does not provide any basis for a rejection under 35 U.S.C. § 112, second paragraph. In particular, since there is no inconsistency between Applicant's usage of the term "perfluorinate" and the definition espoused by the Examiner, the meaning of the term is clearly discernable to those of ordinary skill.

The rejection of claim 22 under 35 U.S.C. § 112, second paragraph, is thus improper. Accordingly, Applicant asks that this rejection be withdrawn.

In the action mailed December 11, 2006, claims 22 and 25 were indicated as being allowable over the references of record. Applicant acknowledges this indication with appreciation. In response thereto, claim 16 has been amended to recite subject matter drawn from former claim 22. Claim 25 has been placed in independent form. Accordingly, claims 16-25 are believed to be allowable.

Further, claim 4 has been amended to recite subject matter related to that recited in claim 22, with the exception that the "treated surface" of claim 22 is has been changed to the "fluorinated surface" recited in claim 4. Accordingly, claims 4-5 and 9-10 are believed to be allowable.

Claim 6 has been amended to delete reference to "a PVDF." Accordingly, claims 6 and 8 are believed to be allowable on the same basis as claim 25.

Claim 11 was rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,958,524 to Dehennau et al. (hereinafter "Dehennau"). Claim 11 has been amended to recite subject matter drawn from former claim 19, which was rejected on the same basis.

The rejection of former claim 19 contended that, in the context of a product-by-process claim, the burden was on applicants to demonstrate that a claimed product differs from that shown in the prior art.

While this may be true, these claims recite a treated surface that comprises a molecular layer that includes the reaction product of a monolayer of a first chemisorbed species and a second species. Such a molecular layer is a structural limitation, rather than a process limitation. Moreover, based on Dehennau's disclosed processes (e.g., fluorination by exposure to gaseous fluorine followed by "energetic surface oxidation"), it is clear that Dehennau neither describes nor suggests a treated surface that comprises such a molecular layer. This is also believed to be true of the disclosures cited at col. 3, line 56, which are submitted herewith.

Accordingly, claims 11, 12, and new claim 26 are believed to be allowable. Applicant thus requests that the rejections of claims 11 and 12 be withdrawn.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally,

nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicant asks that all claims be allowed. Please apply the excess claims fee, along with any other charges or credits, to Depcsit Account No. 06-1050.

Respectfully submitted,

Date: March 12, 2007

Scott C. Harris
Reg. No. 32,030
Attorney for Intel Corporation

Fish & Richardson P.C.
USPTO Customer No. **20985**
12390 El Camino Real
San Diego, CA 92130
Telephcne: (858) 678-5070
Facsimile: (858) 678-5099

BY
JOHN F. CONROY
REG. NO. 45,485

SCH/JFC/jhj
10713819.doc

Appendix A

polymer, *n.*

DRAFT REVISION Sept. 2006

Chem.

Brit. /ˈpɒlɪmə/, *U.S.* /ˈpɑləmər/ [< POLY- *comb. form* + -MER *comb. form*[2], after POLYMERIC *adj.*[1] Cf. ancient Greek *πολυμερής* consisting of many parts. Cf. also French *polymère* (1876 as noun; earlier as adjective in sense 'polymeric' (1847 in chemistry)). Cf earlier POLYMERIC *adj.*[1], POLYMERIDE *n.*, POLYMERISM *n.*[1], and POLYMERIZE *v.* Cf. also ISOMER *n.*, METAMER *n.*[1]]

1. Originally: a compound whose formula is an exact multiple of that of another compound, being composed of the same elements in the same proportions. Now: a compound with a molecular structure in which a (usually large) number of similar polyatomic units are bonded together; *spec.* any of the mainly synthetic organic compounds of this kind which form plastics, resins, etc.

The repeating units often correspond to molecules of a single compound, but polymers may also result from combination of two or more different constituents; in either case, linking of the component units may be accompanied by the elimination of small molecules, so that the formula and molecular weight of the polymer are unlikely to be exact multiples of those of a constituent monomer. In some contexts the use of the term *polymer* is restricted to cases where the number of units in the molecular structure is large.

high, ladder, stereoblock polymer: see the first element.

1866 H. E. ROSCOE *Lessons Elem. Chem.* xxxv. 314 Cyanuric Acid... This polymer of cyanic acid is a solid crystalline substance formed on heating urea. **1866-7** *Proc. Royal Soc.* **15** 135 As these hydrocarbons..differ by C_2H_4, it appears to me almost certain that they are polymers of the hydrocarbons of the acetylene series. **1909** *Science* 26 Feb. 360/2 Bakelite is a polymer of an oxybenzoyl-alcohol-methylene-glycol-anhydride. **1929** W. H. CAROTHERS in *Jrnl. Amer. Chem. Soc.* **51** 2548 Whatever the term polymer may mean now, it does not mean precisely what Berzelius intended, and the conditions which he set up are not sufficient to define it. **1929** W. H. CAROTHERS in *Jrnl. Amer. Chem. Soc.* **51** 2549 Two types of polymers may be distinguished... (1) Addition or A polymers. The molecular formula of the monomer is identical with that of

the structural unit... (2) Condensation or C polymers: the molecular formula of the monomer differs from that of the structural unit. **1935** C. ELLIS *Chem. Synthetic Resins* I. iv. 53 In a condensation reaction, the polymer is no longer a multiple of the monomer as in the case of the addition polymer. **1974** D. M. ADAMS *Inorg. Solids* vii. 239 The most stable polymers for other metals are $M_6O_{19}^{8-}$ (M = Nb, Ta), $Mo_7O_{24}^{6-}$, $Mo_8O_{26}^{4-}$ and $HW_6O_{21}^{5-}$. **1978** *Prospects for Polymers* (Shell Internat. Petroleum Co.) 1 Not all polymers are man-made: wool, rubber, cotton and silk are examples of natural polymers. **1982** G. C. HILL & J. S. HOLMAN *Chem. in Context* 169/2 'Orlon' is a polymer of propenenitrile alone; 'Acrilan' and 'Courtelle' are copolymers, having small amounts of chloroethene (vinyl chloride) copolymerized with the propenenitrile. **1996** *Daily Tel.* 8 Jan. 18/4 When it comes to polymers, the genetic molecule DNA is the nonpareil.

2. As a mass noun: material composed of a high polymer; polymeric material.

1946 *Nature* 5 Oct. 476/2 A high degree of unshrinkability is obtained with 10 per cent of polymer within the fibres. **1992** *Guns Illustr.* (ed. 24) 90/1 The barrel is also entirely sheathed in polymer, with flat sides and a vented rib on top. **1995** *Economist* 30 Sept. 137/3 Once the unpolymerised precursor had been washed away, the pattern remained in miniature as a series of blobs of polymer. **1997** *New Scientist* 15 Nov. 7/2 The thin layer of polymer that covers the clear surface of a CD, DVD or CD-ROM.

COMPOUNDS

General *attrib.*

polymer chain *n.*

1939 *Proc. Royal Soc.* A. **170** 306 The mechanism of initiation of *polymer chains by catalysis has been discussed. **1999** P. W. GRUBB *Patents for Chemicals* (ed. 3) xi. 203 The nature of the end-groups on a polymer chain may modify the properties of the polymer very considerably.

polymer science *n.*

[**1945** *Sci. Monthly* Jan. 72/1 Research workers who..are interested and qualified in high-polymer science.] **1948** *Science* 14 May 518/2 The Alfrey book..is thus a significant advance in the field of *polymer science. **2001** R. W. CAHN *Coming of Materials Sci.* viii. 310 The important domain of polymer chemistry has become, by degrees, a branch of science almost wholly divorced from the rest of polymer science.

polymer solution *n.*

1935 *Proc. Royal Soc.* A. **148** 80 This suggests poly-dispersity of the intermediate *polymer solutions. **1996** *Swimming Times* May 29/2 Glucose polymer solutions may have a similar osmolality to a 4% carbohydrate drink but they will empty more slowly from the stomach.

polymer chemist *n.* an expert in or student of polymer chemistry.

1948 *Science* 19 Nov. 545/2 In recent years *polymer chemists have shown how it is possible to synthesize compounds of high molecular weight..from known compounds (monomers) of low molecular weight. **1997** *New Scientist* 15 Nov. 75/1 (*advt.*) A polymer chemist..with research experience in the analysis and derivatisation of polysaccharides.

polymer chemistry *n.* the branch of chemistry concerned with the preparation and properties of polymers.

1945 *Science* 2 Feb. 113/2 A separate division of *polymer chemistry has been established under the direction of Dr. Herman F. Mark, professor of organic chemistry. **1953** *Endeavour* Apr. 92/1 In terms of polymer-chemistry concepts, the molecular shape is changed by the electrostatic field. **1992** D. I. GOLDBERG *U.S. Man-made Fiber Industry* ii. 13 Progress in polymer chemistry led to synthetic fibers with price-performance properties often far superior to those of natural and cellulosic fibers.

Appendix B

Book Search

Books 1 - 30 of 553 on **"the surface of the polymer"**. (0.23 seconds)

Modern **Polymer** Flame Retardancy - Page 7
by S. M. Lomakin, Gennadiĭ Efremovich Zaikov - Technology - 2003 - 266 pages
... conduction with a one-step global degradation reaction at **the surface of the polymer** sample or distributed in the sample without any mass transport. ...
Limited preview - Table of Contents - About this book

Chemical Physics **of Polymer** Degradation and Stabilization - Page 302
by Nikolaĭ Markovich Emanuel′ - 1987 - 336 pages
Part of the heat is released directly on **the surface of the polymer**, rather than in the gas flame zone. Theoretically, such an important parameter of ...
Limited preview - Table of Contents - About this book

Metallized Plastics 7: Fundamental and Applied Aspects - Page 283
by K. L. Mittal - Architecture - 2001 - 306 pages
The most obvious variable due to environmental effects is the amount of oxygen that may be included on **the surface of the polymer** either as bonded COC, C=O, ...
Limited preview - Table of Contents - About this book

Blood Compatible Materials and Their Testing - Page 40
by Steen G. Dawids, A. Bantjes - 1986 - 392 pages
Because all spherulite is surrounded by an amorphous layer, **the surface of the polymer** should also consist of an amorphous phase allowing chain rotation. ...
Limited preview - Table of Contents - About this book

Polymer - Page 1298
by ScienceDirect (Online service) - 1984
It was further found that these oxidizing groups were contained in small fragments on **the surface of the polymer** since they could be washed away simply by ...
Snippet view - About this book

Paints, Coatings and Solvents - Page 133
by Dieter Stoye, Werner Freitag - 1998 - 431 pages
The anchoring of the solvated sheath to **the surface of the polymer** particles has received relatively little attention. At least one component of a graft or ...
Limited preview - Table of Contents - About this book

Proceedings **of the** 8th Asian Conference on Solid State Ionics: trends in **the** new millennium :... - Page 271
by B V R Chowdari - Technology - 2002 - 750 pages
However, the observed result that tapp>0.5 in the gel with lower porosity suggests that **the surface of the polymer** is interactive with the anión to restrict ...
Limited preview - Table of Contents - About this book

Modern Methods **of Polymer** Characterization - Page 179
by Howard G. Barth, Jimmy W. Mays - 1991 - 574 pages
... may be retained also by the support, by the inner walls of the Chromatograph (in case of very high-boiling probes), and by **the surface of the polymer**. ...
Limited preview - Table of Contents - About this book

Tailored Metal Catalysts - Page 125
by Yasuhiro (EDT) Iwasawa - 1986 - 348 pages
In (b) the metal particles are distributed on and/or near **the surface of the polymer** resin, whereas in (c) the particles are distributed uniformly inside ...
Limited preview - Table of Contents - About this book

Polymer Yearbook 17 - Page 118
by PETHRICK, Richard A. Pethrick, Pethrick A. Pethrick - 2000 - 448 pages
Enzymes diffuse easily in the capsule, and are adsorbed on **the surface of the polymer** with different concentrations. The surface concentration of enzyme ...
Limited preview - Table of Contents - About this book

The New Medium **of** Print: Material Communication in **the** Internet Age - Page 204
by Frank Cost - 2005 - 256 pages
... dye molecules will turn to gas and permeate **the surface of the polymer** where they will be trapped and become a permanent part of the plastic surface. ...
Limited preview - Table of Contents - About this book

Modern Aspects **of** Colloidal Dispersions: Results from **the** Dti Colloid Technology Programme - Page 42
by Ronald H. (EDT) Ottewill, A. R. (EDT) Rennie - 1998 - 332 pages
This effect may be due to the inability of the electrons to penetrate the thin layer of condensed water which covers **the surface of the polymer** latices when ...
Limited preview - Table of Contents - About this book

Recent advances in scanning probe microscopy **of** polymers: invited from **the** present talks at **the**...
In the simplest AFM modes of operation (contact and 'tapping'), topographic images representing **the surface of the polymer** specimen can be obtained. ...
Limitec preview - Table of Contents - About this book

Treatise on Controlled Drug Delivery: Fundamentals Optimization Applications - Page 486
by Agis Kydonieus - 1992
In this device, DDVP diffuses to **the surface of the polymer** resin and evaporates due to its high vapor pressure. The pesticide vapors kill any offending ...
Limited preview - Table of Contents - About this book

Polymers and Light - Page 93
by Thomas K. Lippert, Savas Georgiou - 2004 - 360 pages
This can be assigned to a shielding effect of the carbon species at **the surface of the polymer**, as detected with the other spectroscopic techniques. ...
Limited preview - Table of Contents - About this book

Catalysis by **Polymer**-Immobilized Metal Complexes - Page 197
1999 - 424 pages
In immobilized catalysts deactivation of active sites is controlled by their formation; **the surface of the polymer** support or grafted functional layer, ...
Limited preview - Table of Contents - About this book

Polyimides: Fundamentals and Applications - Page 421
by Malay K. Ghosh - 1996 - 912 pages
... **the surface of the polymer** [1251. ...
Limited preview - Table of Contents - About this book

Fundamentals **of Polymer** Degradation and Stabilisation - Page 103
by Norman S. Allen, Michele Edge - Technology - 1992 - 216 pages
(1) Pigments This involves reflecting the damaging light from **the surface of the polymer** through: (a) coating the surface, eg paint or metallising; ...
Limited preview - Table of Contents - About this book

Formation and Trapping **of** Free Radicals - Page 373
by Herbert P. Broida, Arnold M. Bass - 1960 - 522 pages
These observations were interpreted by assuming chain transfer to **the surface of the polymer**, resulting in radicals which can propagate and which transfer ...
Snippet view - About this book

Long-Term Properties **of** Polyolefins. - Page 283
by Ann-Christine Albertsson - Science - 2004
Since the permeability of the liquid in the polymer depends both on the nature of the bulk as well as **the surface of the polymer**, the surface modification ...
Limited preview - Table of Contents - About this book

McGraw-Hill Encyclopedia **of** Science & Technology - Page 394
by Sybil P. Parker - 1997 - 5000 pages
... sulfonate groups attract the positively charged quaternary ammonium ions and bind the latex particles very strongly to **the surface of the polymer** bead. ...
Snippet view - About this book

Improved Fire-And Smoke-Resistant Materials for Commercial Aircraft Interiors: A Proceedings - Page 124
1995
In the condensed phase these will form a multicellular char layer on **the surface of the polymer**. The intumescence approach has great appeal because it ...
Limited preview - Table of Contents - About this book

Liquid Crystal Dispersions - Page 101
by Paul S. Drzaic - Science - 1995 - 429 pages
The most important factor in determining the droplet configuration is usually the preferred alignment of the nematic at **the surface of the polymer** binder. ...
Limited preview - Table of Contents - About this book

Contributions From 6th Austrian **Polymer** Meeting - Page 285
by Wolfgang H. Binder - Technology - 2005 - 444 pages
The properties of **the surface of the polymer** layer formed were also studied. The surface of the layer under consideration as seen from the bird's eye view ...
Limited preview - Table of Contents - About this book

Handbook **of** Polyethylene: Structures, Properties and Applications - Page 196
by Andrew J. Peacock - 2000 - 534 pages
Both **the surface of the polymer** and the counterface may be modified over a period of time. Abrasion removes the original polymer surface with its inherent ...
Limited preview - Table of Contents - About this book

Polymer Membranes: invited lectures presented at **the** 41st Microsymposium **of**

the Prague Meetings... - Page 2
by Jaroslav Kahovec - 2003 - 166 pages
On the other hand, the layer deposited on the surface of the electrode being conductive, the deposit can occur at **the surface of the polymer**. ...
Limited preview - Table of Contents - About this book

Plasma **Surface** Modification and Plasma Polymerization - Page 44
by Norihiro Inagaki - 1996 - 280 pages
... makes radicals homogeneously in the bulk of the polymer material, and plasma having low energy makes radicals near **the surface of the polymer** material. ...
Limited preview - Table of Contents - About this book

Polymer Surfaces, Interfaces and Thin Films - Page 290
by Alamgir Karim, Sanat Kumar - 2000 - 294 pages
If chains at **the surface of the polymer** are more mobile than those in the bulk, one might expect crystallization to begin at a lower temperature at the ...
Limited preview - Table of Contents - About this book

Integrated Biomaterials Science - Page 331
by Rolando Barbucci - 2002 - 600 pages
While i; is a property of the bulk material, it also gives an indication of the mobility of the chain segments on **the surface of the polymer**. ...
Limited preview - Table of Contents - About this book

Handbook **of** Plasticizers - Page 109
by George Wypych - 2004
In this case polymer and plasticizer repulse each other and the glide planes are at **the surface of the polymer** molecules. From these considerations it was ...
Limited preview - Table of Contents - About this book

Gooooooooogle ▶
Result Page: 1 2 3 4 5 6 7 8 9 10 **Next**

"the surface of the polymer" Search Books

Google Book Search Help | Advanced Book Search

About Google Book Search - Book Search Blog - Information for Publishers - Google Home

Appendix C

Book Search

Books 1 - 30 of 231 on **"the bulk of the polymer"**. (0.16 seconds)

Polymer - Page 896
by ScienceDirect (Online service) - 1960
... a good opportunity to use esr measurements to examine the effects of annealing
on the motion of chain ends on the surface of **the bulk of the polymer**. ...
Snippet view - About this book

Polymer Devolatilization - Page 6
by Ramon J. Albalak - 1996 - 736 pages
... took into account diffusion from both **the bulk of the polymer** film deposited
on the extruder barrel and from the bulk of the rolling pool of melt formed ...
Limited preview - Table of Contents - About this book

Micro Total Analysis Systems '98: Proceedings **of the** MTAS 1998 Workshop, Banff, Canada - Page 122
by Daniel Jed (EDT) Harrison, Albert Van Den Berg - Technology - 1998 - 508 pages
Since **the bulk of the polymer** film is reduced, it is not surprising that its bulk
properties change as well. One such a bulk property, the work function of ...
Limited preview - Table of Contents - About this book

Drug Delivery: Engineering Principles for Drug Therapy - Page 264
by W. Mark Saltzman - Medical - 2001 - 372 pages
Water penetration occurs initially by diffusion of water molecules through either
the bulk of the polymer or through voids or pore space in the material. ...
Limited preview - Table of Contents - About this book

Polymer Yearbook 17 - Page 134
by PETHRICK, Richard A. Pethrick, Pethrick A. Pethrick - 2000 - 448 pages
However, since the catalysts are unable to penetrate into **the bulk of the polymer**,
the breakdown of bonds occurs only on the surface provoking negligible ...
Limited preview - Table of Contents -

About this book

Adhesion Aspects **of** Thin Films Vol 1 - Page 211
by K. L. Mittal - Architecture - 2001 - 270 pages
Hence, the PET surface consists of highly oriented layers with only weak bonds into **the bulk of the polymer**. Consequently, the bi-axial films have high ...
Limited preview - Table of Contents - About this book

Polymer Characterization: Physical Techniques, 2nd Edition - Page 187
by Donald Campbell, Jim R. White, Richard Arthur Pethrick - 2000 - 481 pages
It is likely that craze formation in **the bulk of the polymer** is responsible for these effects. Grinding of polymers can lead to significantly high static ...
Limited preview - Table of Contents - About this book

Handbook **of Polymer** Science and Technology - Page 198
by Cheremisinoff - 1989 - 758 pages
... the solubility of the additive, its volatilization rate at the polymer surface, and its diffusion coefficient in **the bulk of the polymer**. ...
Limited preview - Table of Contents - About this book

Elements **of Polymer** Science & Engineering: An Introductory Text and Reference for Engineers and... - Page 387
by Alfred. Rudin - 1998 - 509 pages
... they would remain close together even when **the bulk of the polymer** is molten and can reform crystallites very readily when the temperature is lowered. ...
Limited preview - Table of Contents - About this book

Fundamentals **of Polymer** Degradation and Stabilisation - Page 92
by Norman S. Allen, Michele Edge - Technology - 1992 - 216 pages
Initially there is an increase in crosslinking as measured by gel content due to a high rate of radical termination in **the bulk of the polymer** where O2 ...
Limited preview - Table of Contents - About this book

Chemosensors **of** Ion and Molecule Recognition - Page 30
by Anthony W. (EDT) Czarnik, J. P. (Jean Pierre) Desvergne - 1997 - 276 pages
... 18 (which forms **the bulk of the polymer**), methacrylate functionalized monomer 17e (which contains the photo- polymerizable group) and one of the ...
Limited preview - Table of Contents - About this book

Adhesives Age
by Inc Communication Channels - 1958
This means that as the metal is peeled from the polymer, the thin film of polymer will tear and the failure will be directed toward **the bulk of the polymer** ...
Snippet view - About this book

Journal **of polymer** science - Page 40
1986
The dashed line shows that arsenic tri- fluoride also has minimal interaction with **the bulk of the polymer** film, being concentrated at the film's surfaces. ...
Snippet view - About this book

Proceedings **of the** Second All-Union Conference on Radiation Chemistry - Page 658
by Akademiia nauk SSSR. Otdelenie khimicheskikh nauk - 1964 - 800 pages
... introduced the boron compounds as a homogeneous additive and only increased the dose which was distributed uniformly within **the bulk of the polymer**. ...
Snippet view - About this book

Conjugated Polymers: **The** Novel Science and Technology **of** Highly Conducting and Nonlinear... - Page 605
by Jean Luc Brédas, Robert J. Silbey - Technology - 1991 - 648 pages
We consider that in the case where this is silicon dioxide, the polymer surface layer is significantly more disordered than **in the bulk of the polymer**. ...
Limited preview - Table of Contents - About this book

Rubber Product Failure - Page 76
by Roger P. Brown - 2002 - 120 pages
... lip at the die exit on the surface of the die or in **the bulk of the polymer**, ... die surface at the exit or of the cohesion of **the bulk of the polymer**. ...
Limited preview - Table of Contents - About this book

Plasma Surface Modification and Plasma Polymerization
by Norihiro Inagaki - 1996 - 280 pages
Ideally, the modified layer should be a monolayer of the polymer surface in molecular size, and the deeper layer (**the bulk of the polymer** materials) should ...
Limited preview - Table of Contents - About this book

Bacteria in Nature - Page 30
by Edward Renton Leadbetter, Jeanne S. (EDT) Poindexter - 1985 - 282 pages
... 18 (which forms **the bulk of the polymer**), methacrylate functionalized monomer 17e (which contains the photo- polymerizable group) and one of the ...
Limited preview - Table of Contents - About this book

Handbook **of** Conduction Polymers - Page 832
by Ronald L. Elsenbaumer, John R. Reynolds, Terje A. Skotheim - 1998 - 1097 pages
It is therefore harder to get electrons to move into **the bulk of the polymer** film, and this may be responsible for poor device efficiency if excitons are ...
Limited preview - Table of Contents - About this book

Impregnated Fibrous Materials: Report **of** a Study Group ... Organized by **the** International Atomic... - Page 49
by International Atomic Energy Agency - 1968 - 376 pages
The bulk of the polymer, however, is formed by initiation by trapped radicals. The rate of termination of the radicals in dry fibrous structures is so slow ...
Snippet view - About this book

Encyclopedia **of** pharmaceutical technology - Page 296
by James C. Boylan, James Swarbrick - 2000
In animal experiments where bioadhesion has been demonstrated [100], the effect seems to be one associated more with **the bulk of the polymer** administered ...
Limited preview - Table of Contents - About this book

Metallized Plastics 7: Fundamental and Applied Aspects - Page 166
by K. L. Mittal - Architecture - 2001 - 306 pages
However, the formation of metal clusters in **the bulk of the polymer** as well as on the surface diminishes the high temperature thermal-oxidative stability of ...
Limited preview - Table of Contents - About this book

Interactions **of** Polymers With Bioactive And Corrosive Media - Page 198
by T. E. Rudakova, Gennadi Efremovich Zaikov - 1994
... cm2 s1 [79], into **the bulk of the polymer**. The effective rate constant of amide bond breakdown in the amorphous regions of the polymer at 37°C under ...
Limited preview - Table of Contents - About this book

Archives **of** Biochemistry and Biophysics
by ScienceDirect (Online service) - 1965
In this way **the bulk of the polymer** could be removed from the surface with a strainer while the remainder was obtained by complete filtration. ...
Snippet view - About this book

Tissue Engineering and Biodegradable Equivalents: scientific and clinical applications - Page 319
by Kai-Uwe Lewandrowski, Debra J. Trantolo, Shein-Chung Chow - 2002 - 832 pages
In the first phase, water penetrates **the bulk of the polymer**-filled pores, preferentially attacking the chemical bonds in the amorphous phase and converting ...
Limited preview - Table of Contents - About this book

Acid-Base Interactions: Relevance to Adhesion Science and Technology : Volume 2 - Page 585
by K. L. Mittal - 2000 - 624 pages
The polar groups are oriented into **the bulk of the polymer**, away from the air interface. The Ka, Kj data support this contention. ...
Limited preview - Table of Contents - About this book

Polymer-plastics Technology and Engineering - Page 190
by EbscoHost, EBSCO Publishing (Firm) - 1971
Unlike photodegradation, which is primarily a surface phenomenon, breakdown due to radiation occurs randomly, even within **the bulk of the polymer**. d. ...
Snippet view - About this book

0Rganic Light-Emitting Devices: a survey - Page 149
edited by Joseph Shinar - 2003 - 385 pages
7 Both oxygen and water are important in causing degradation, both by attack on **the bulk of the polymer** and by degradation of the electrodes, ...
Limited preview - Table of Contents - About this book

Water-Soluble Polymers for Petroleum Recovery - Page 185
by Donald N. Schulz, G. Allan Stahl - Technology - 1988
This contrasting behavior may be visualized by the fact that even though **the bulk of the polymer** contains equal amounts of both charges, the individual ...
Limited preview - Table of Contents - About this book

Novel food packaging techniques - Page 85
edited by Raija Ahvenainen - 2003
For bulk covalent immobilisation, the active agent will not be able to migrate from **the bulk of the polymer** to the surface where it will be active, ...
Limited preview - Table of Contents - About this book

Gooooooooogle ▶
Result Page: 1 2 3 4 5 6 7 8 **Next**

"the bulk of the polymer" Search Books

Google Book Search Help | Advanced Book Search

About Google Book Search - Book Search Blog - Information for Publishers - Google Home